

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

Figure 1

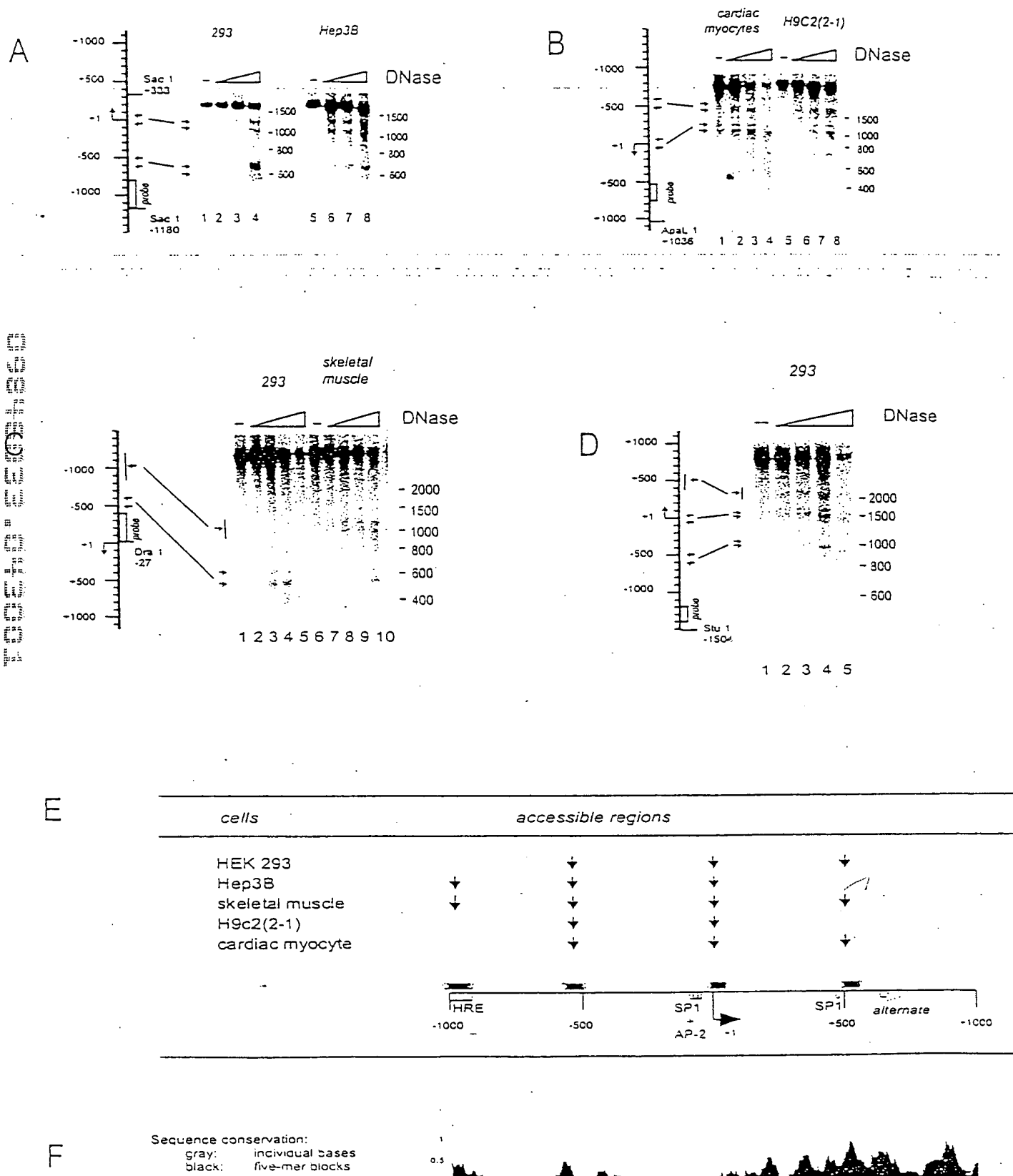
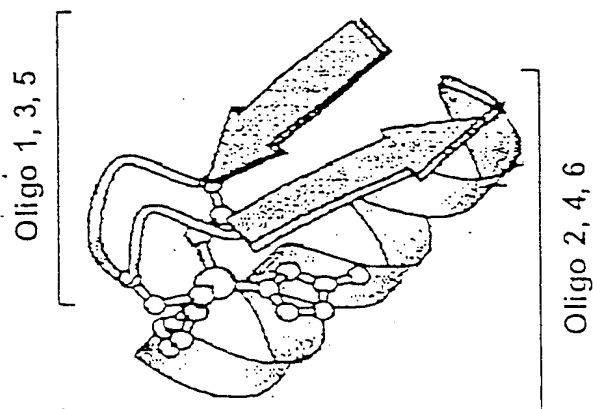
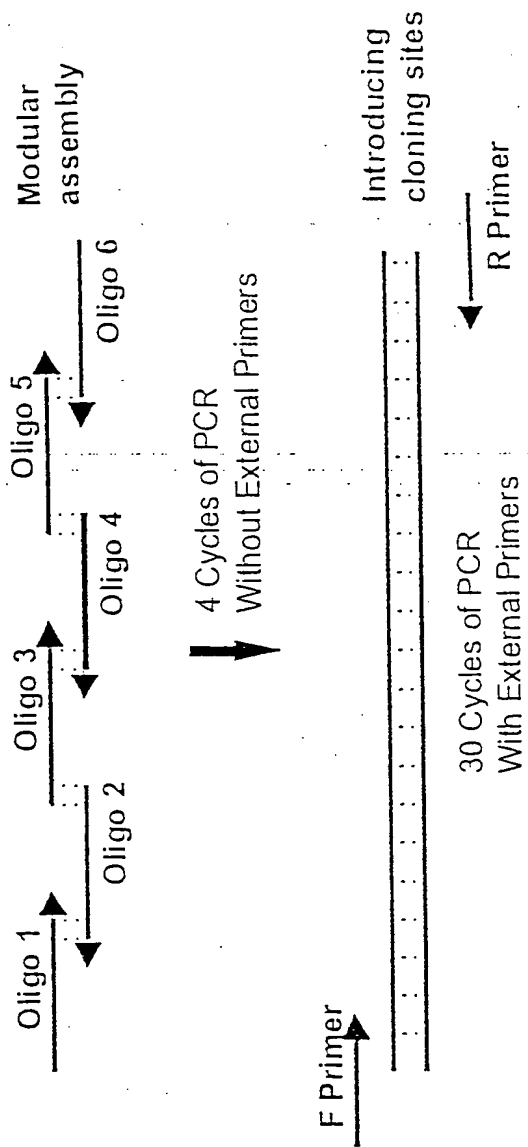


Figure 2

A



B

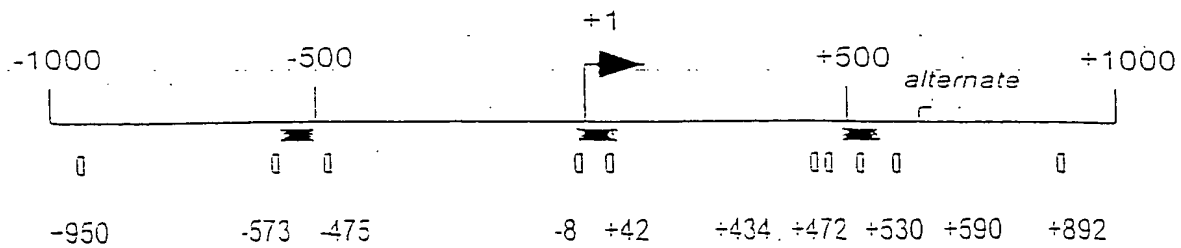


C



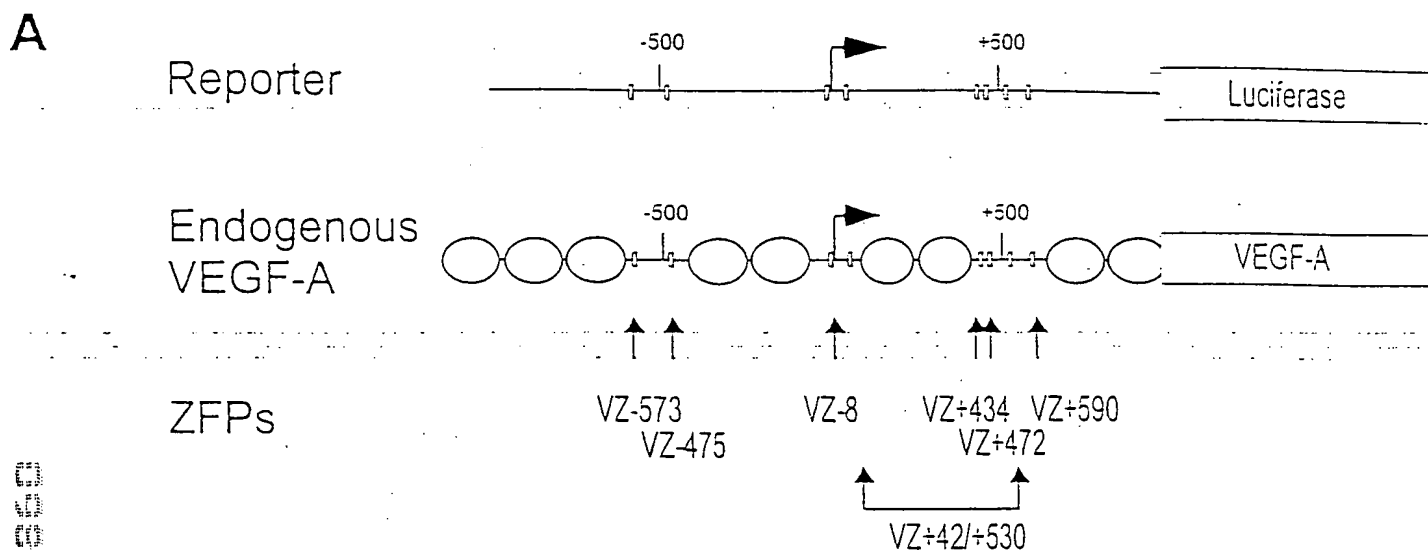
# Figure 2

D



bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2014. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

Figure 3



**B**

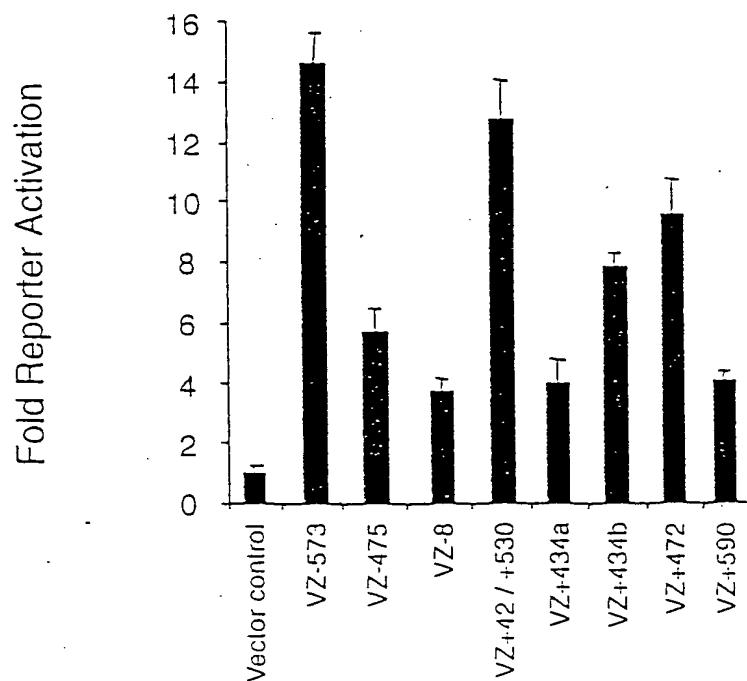
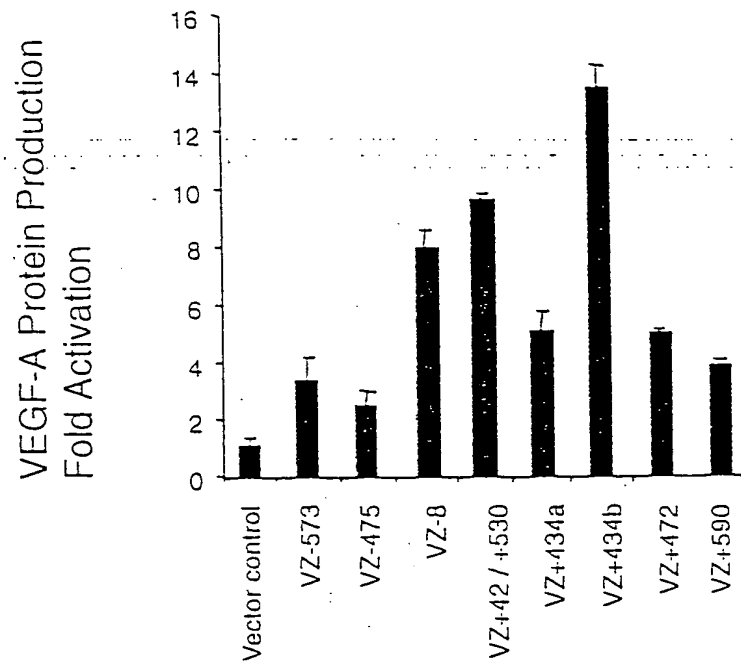


Figure 3

C



D

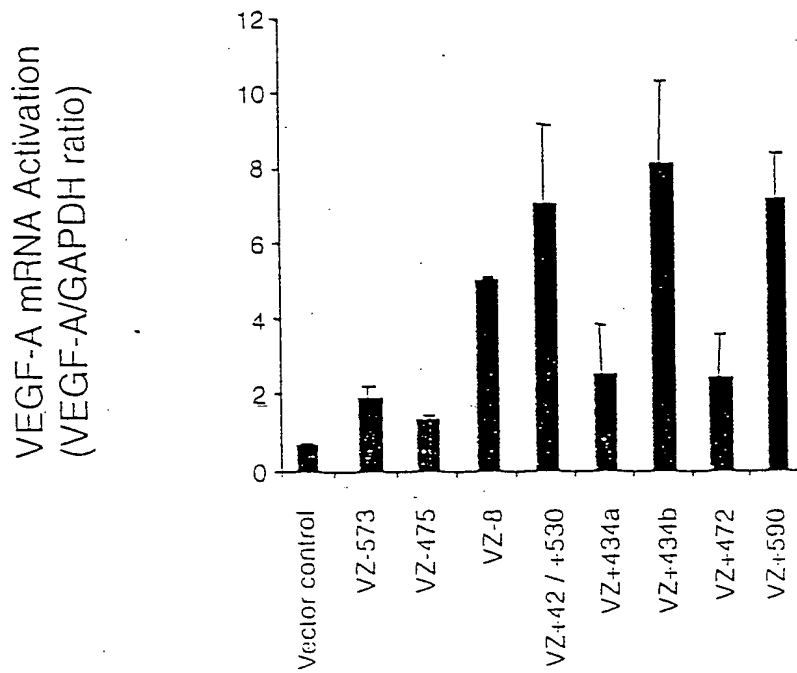
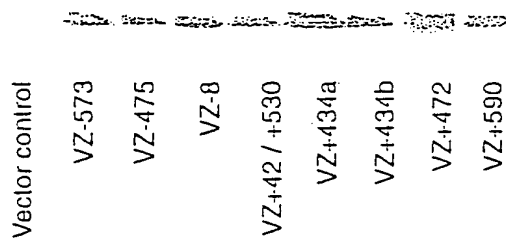


Figure 3

E

ZFP  
Protein



F

Relative ZFP mRNA levels  
(VP16 / GAPDH by Taqman)

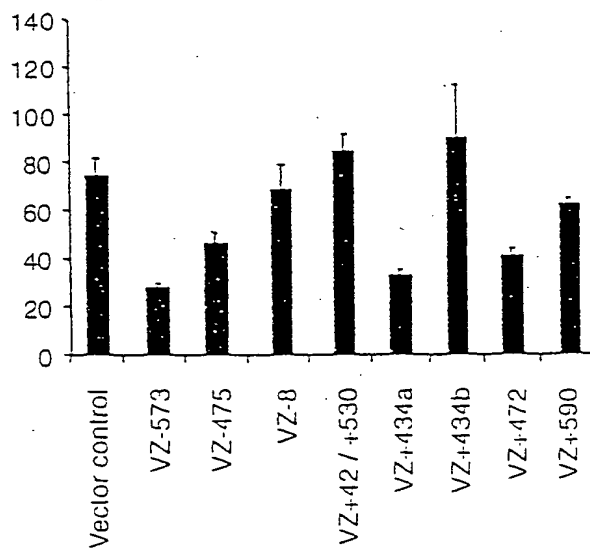
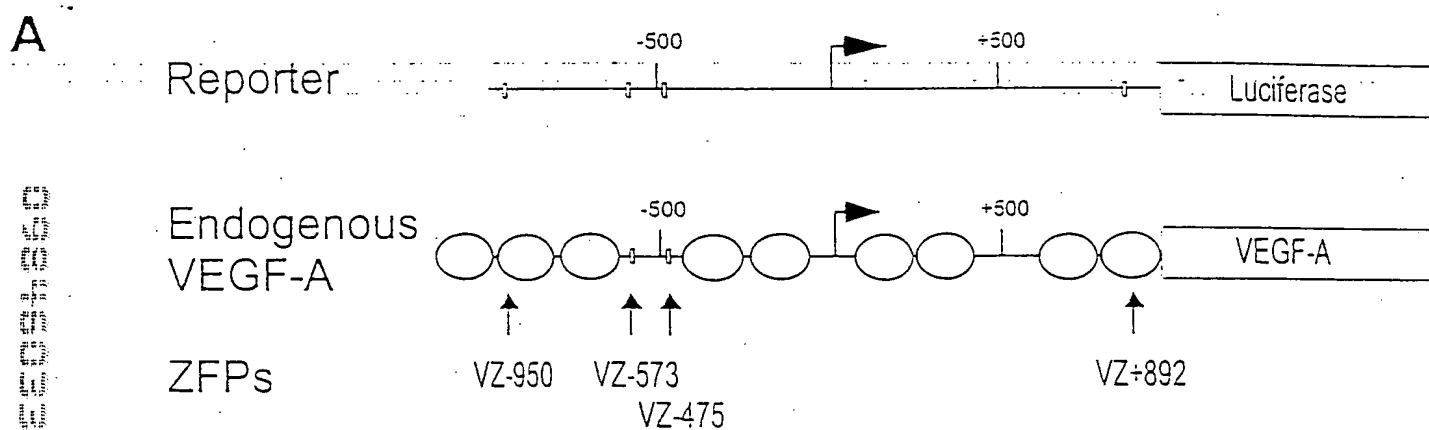
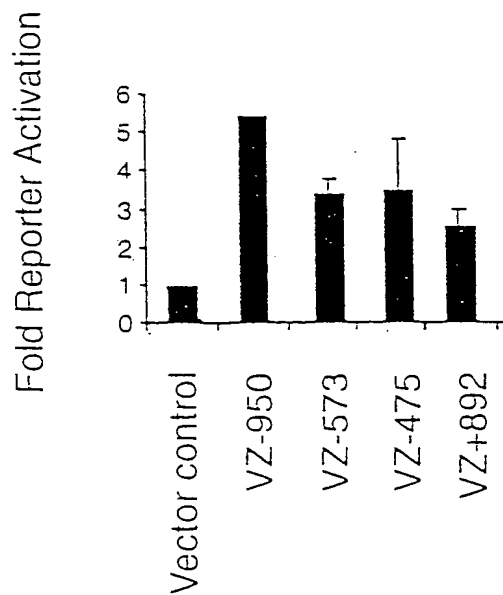


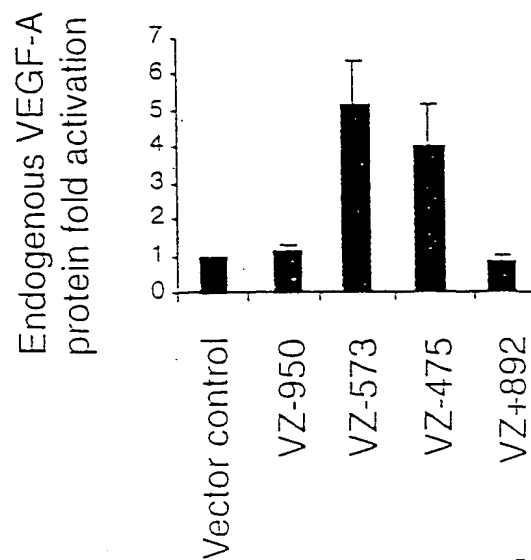
Figure 4



**B**

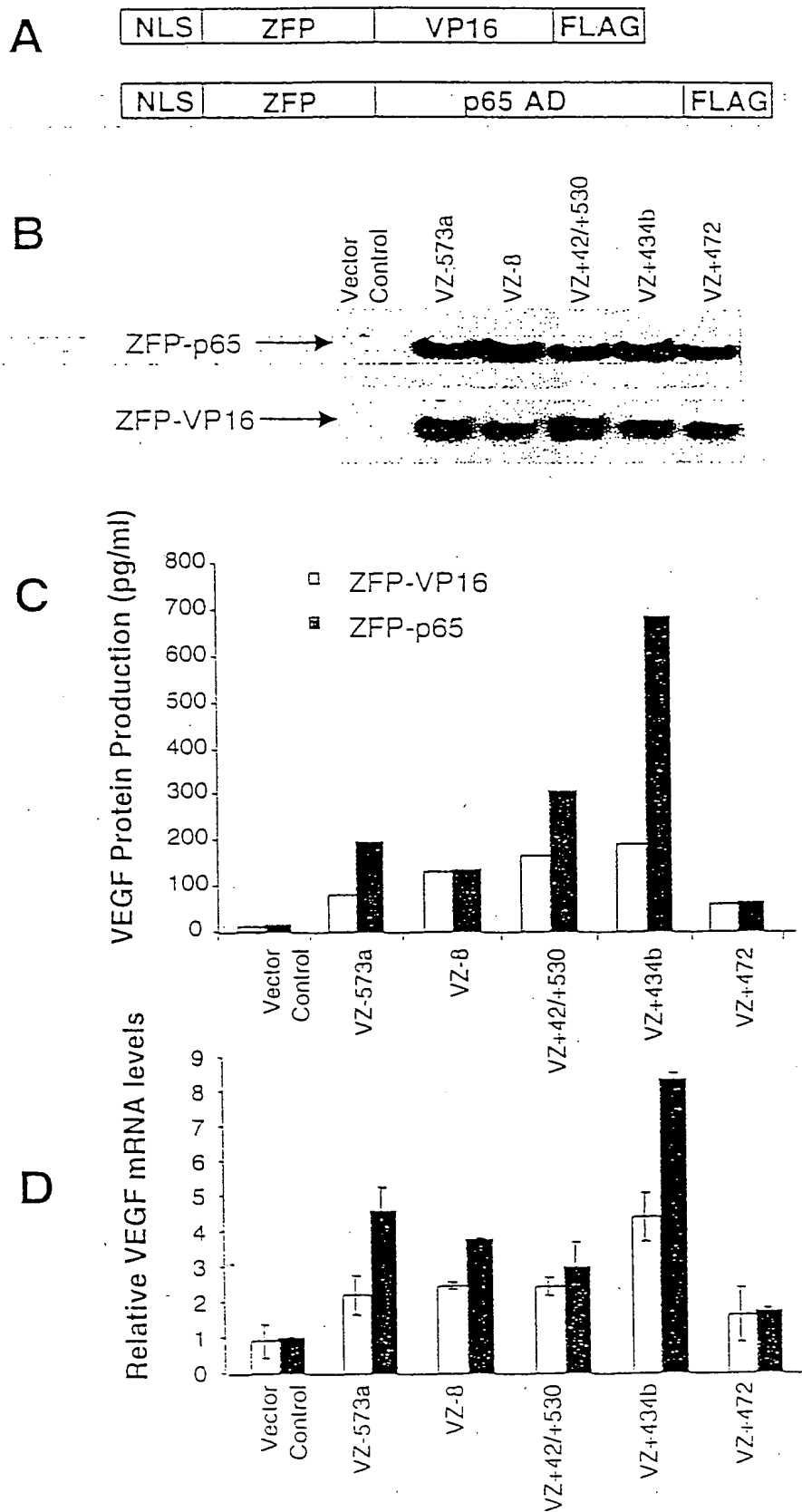


**C**





# Figure 5



# Figure 6

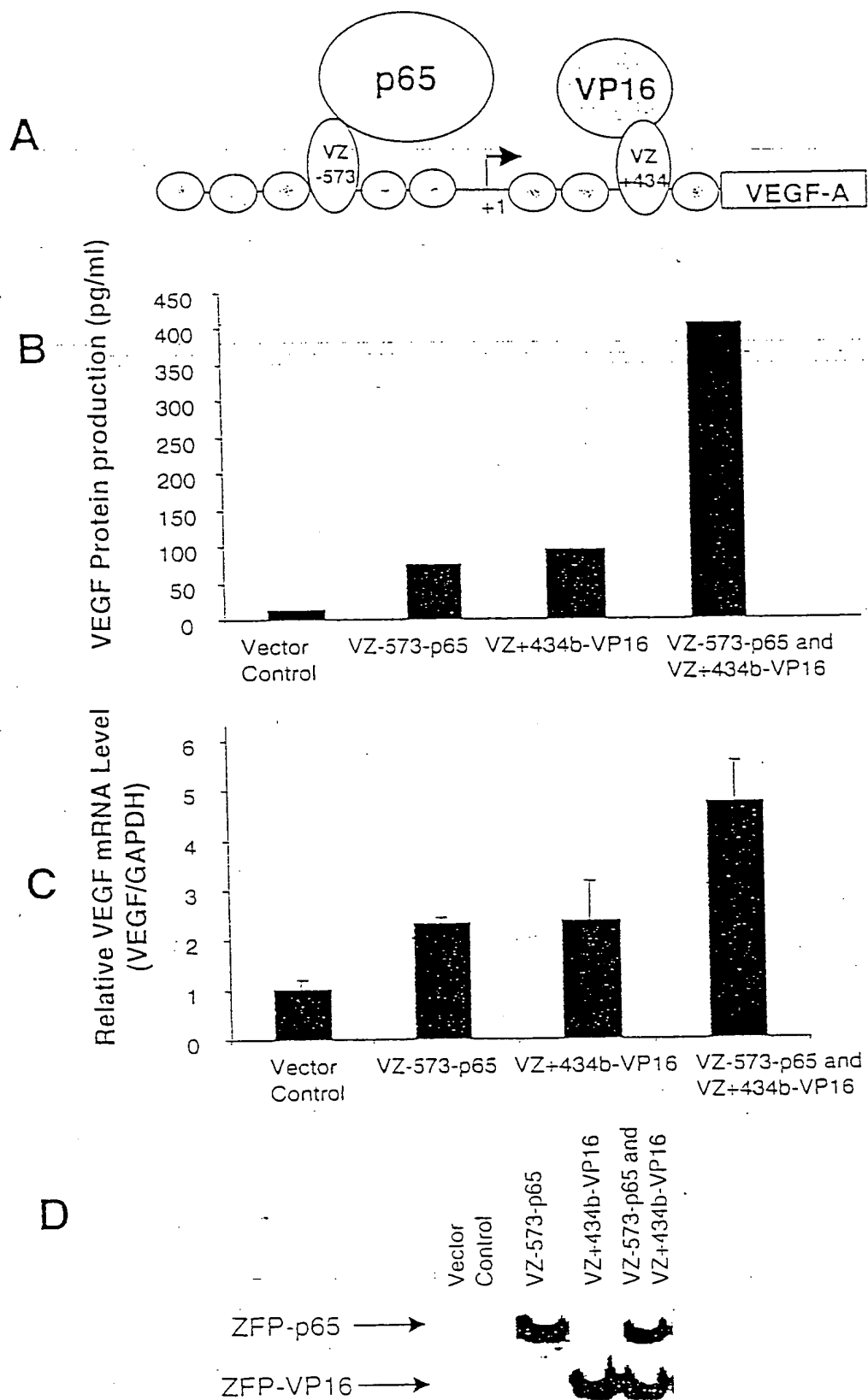
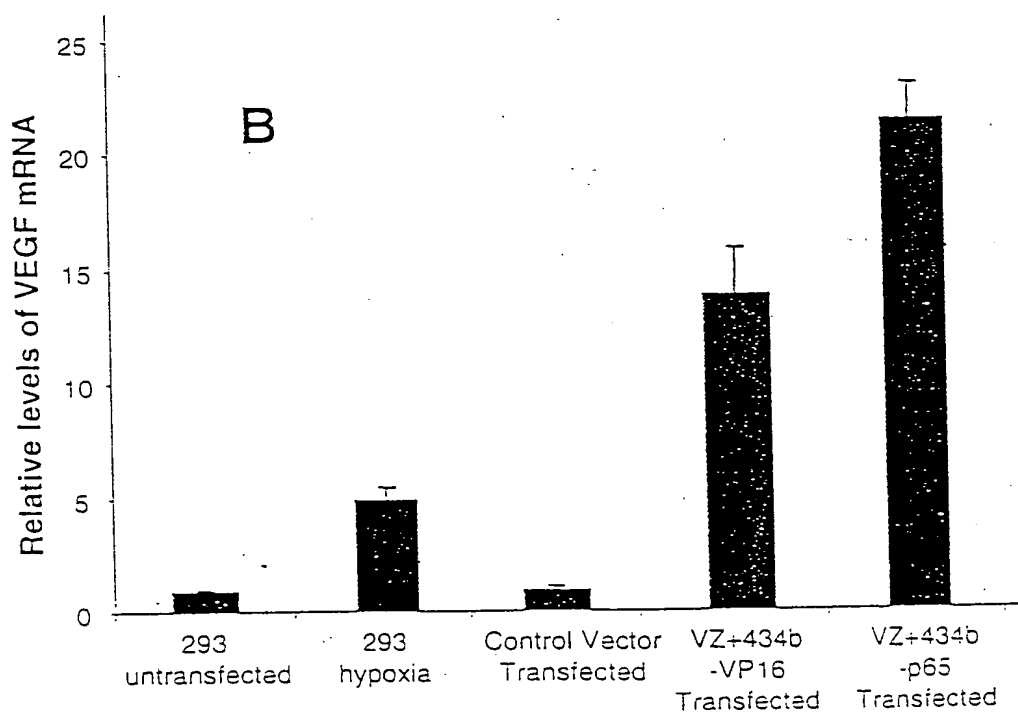
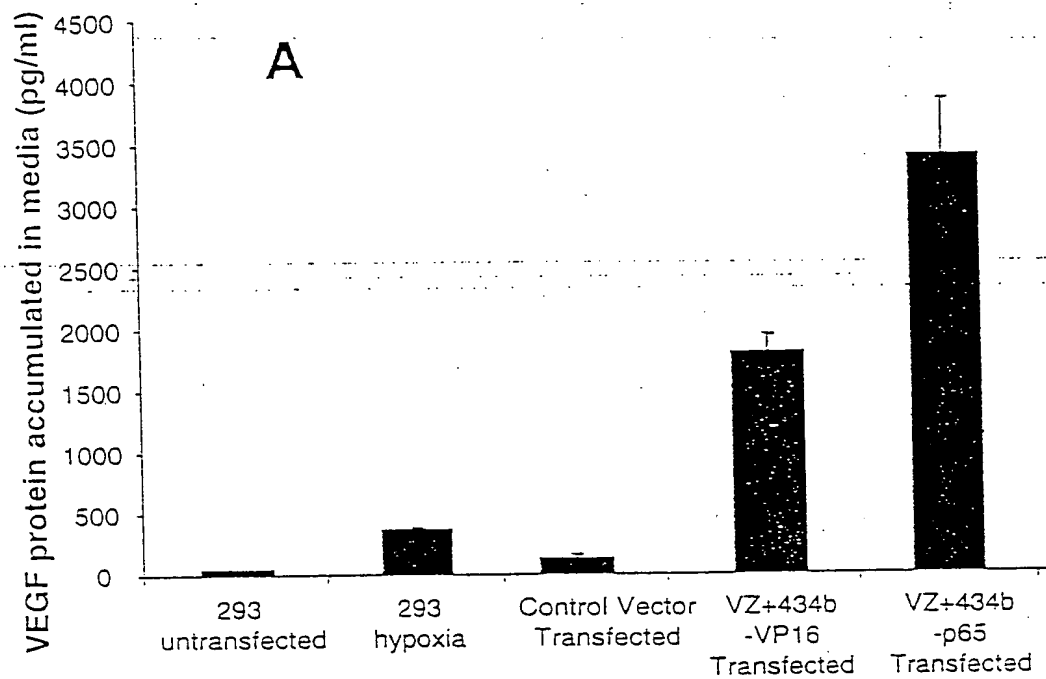
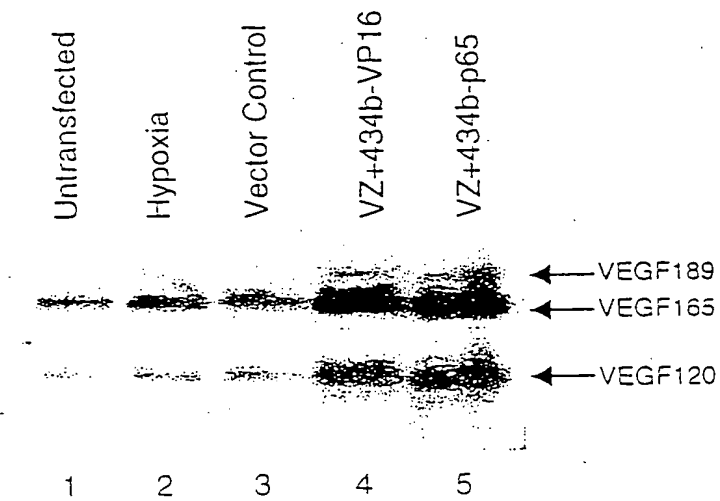


Figure 7



\_\_\_\_\_

D



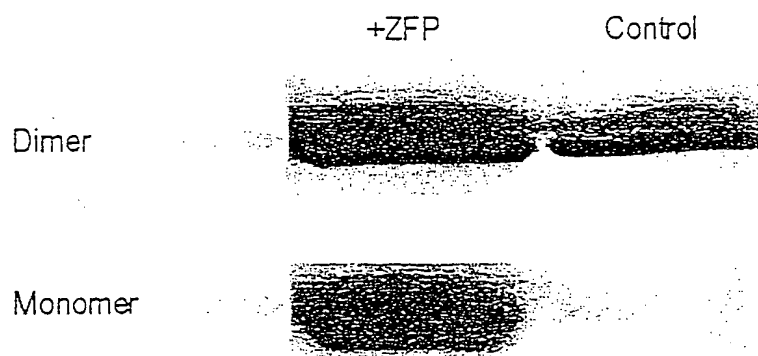


FIG. 8

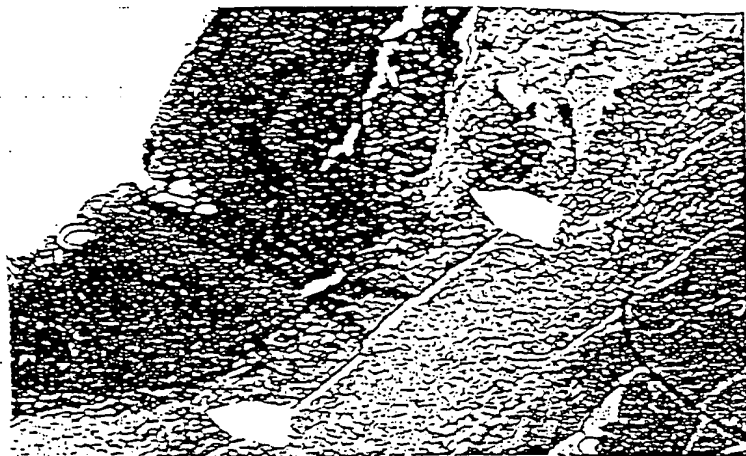
Control

A.



+ ZFP

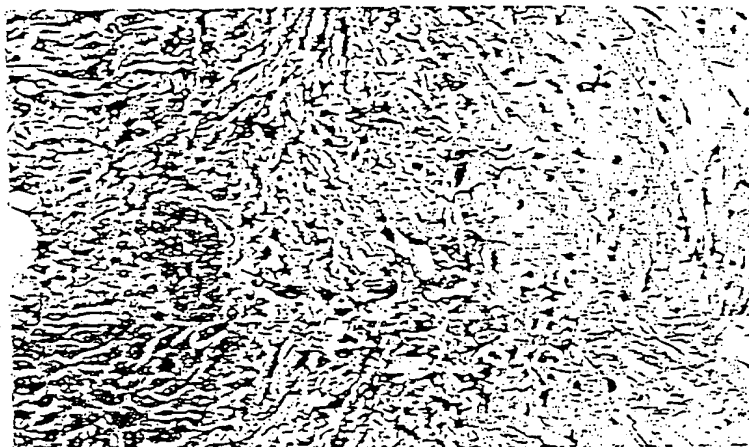
B.



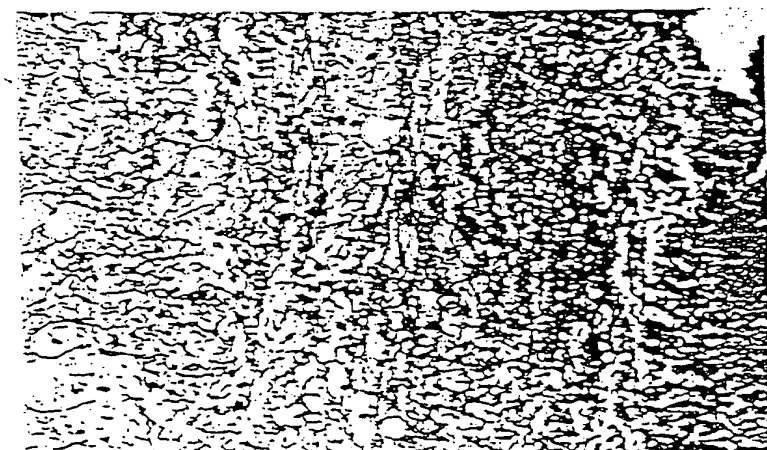
C.



D.



E.

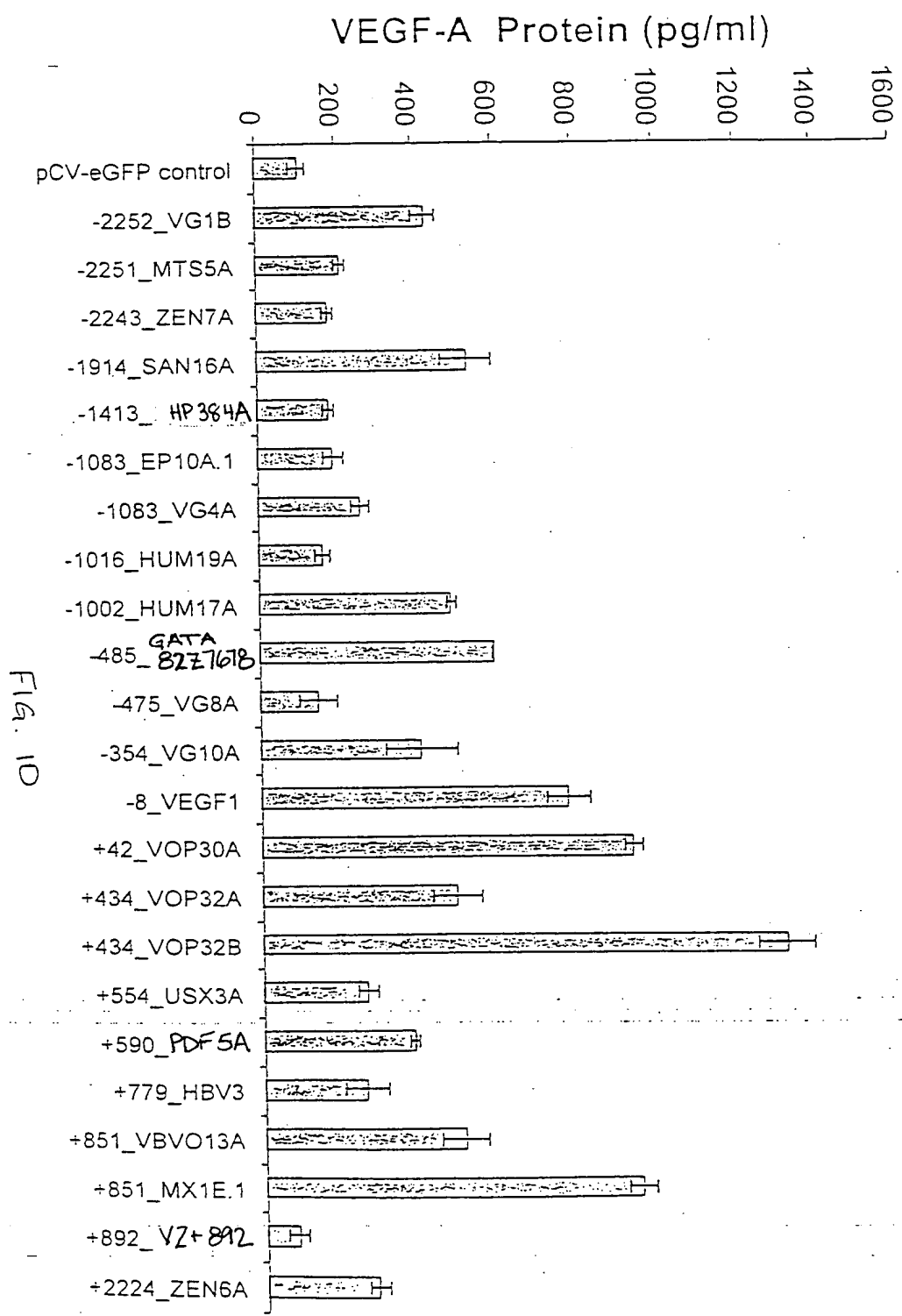


F.



FIG. 9

# Activation of Human VEGF-A Gene By ZFPs in 293 Cells (VEGF-A protein production detected by ELISA)



# Activation of Human VEGF-A Gene by ZFPs (VEGF-A mRNA Detected by Taqman Analysis)

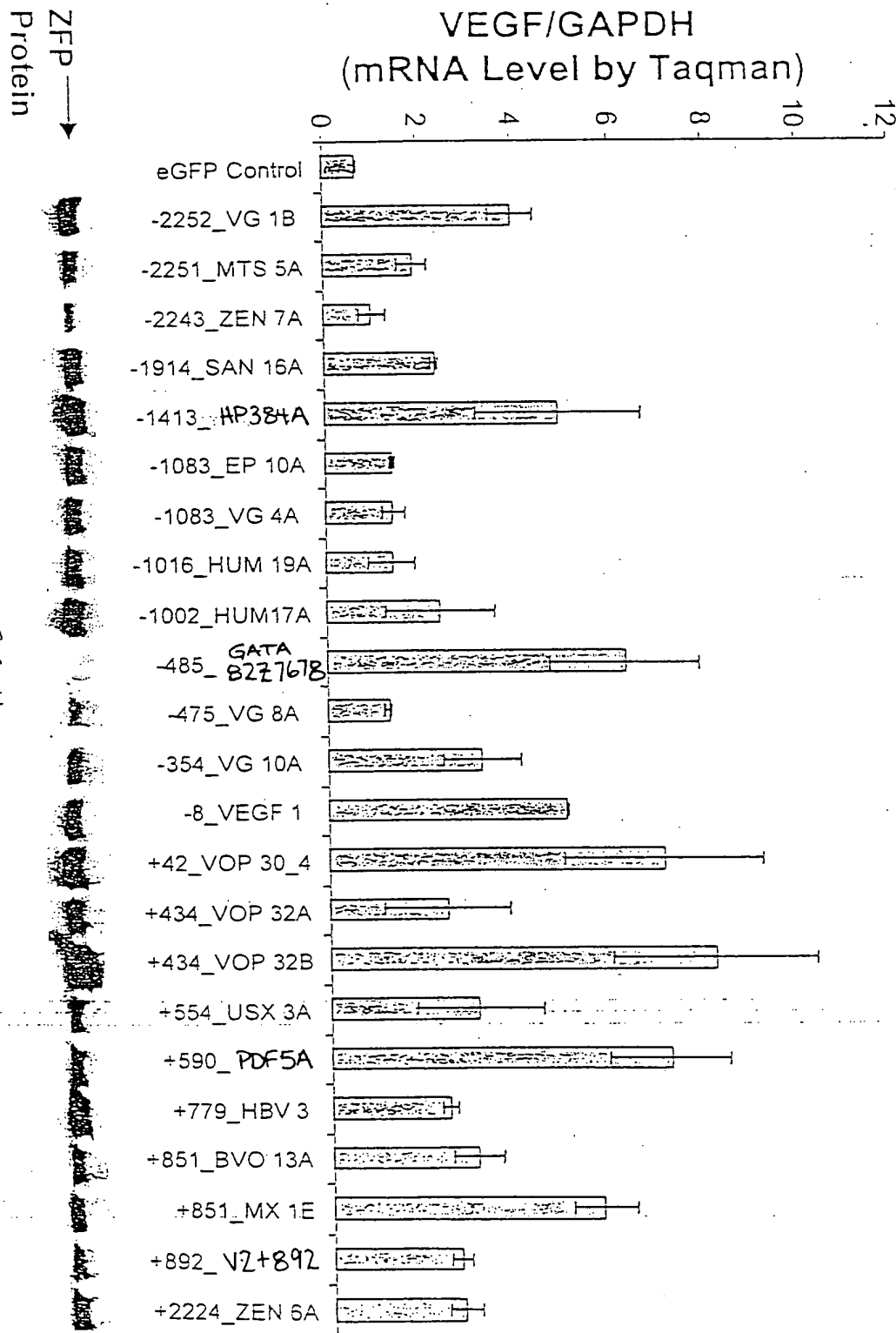
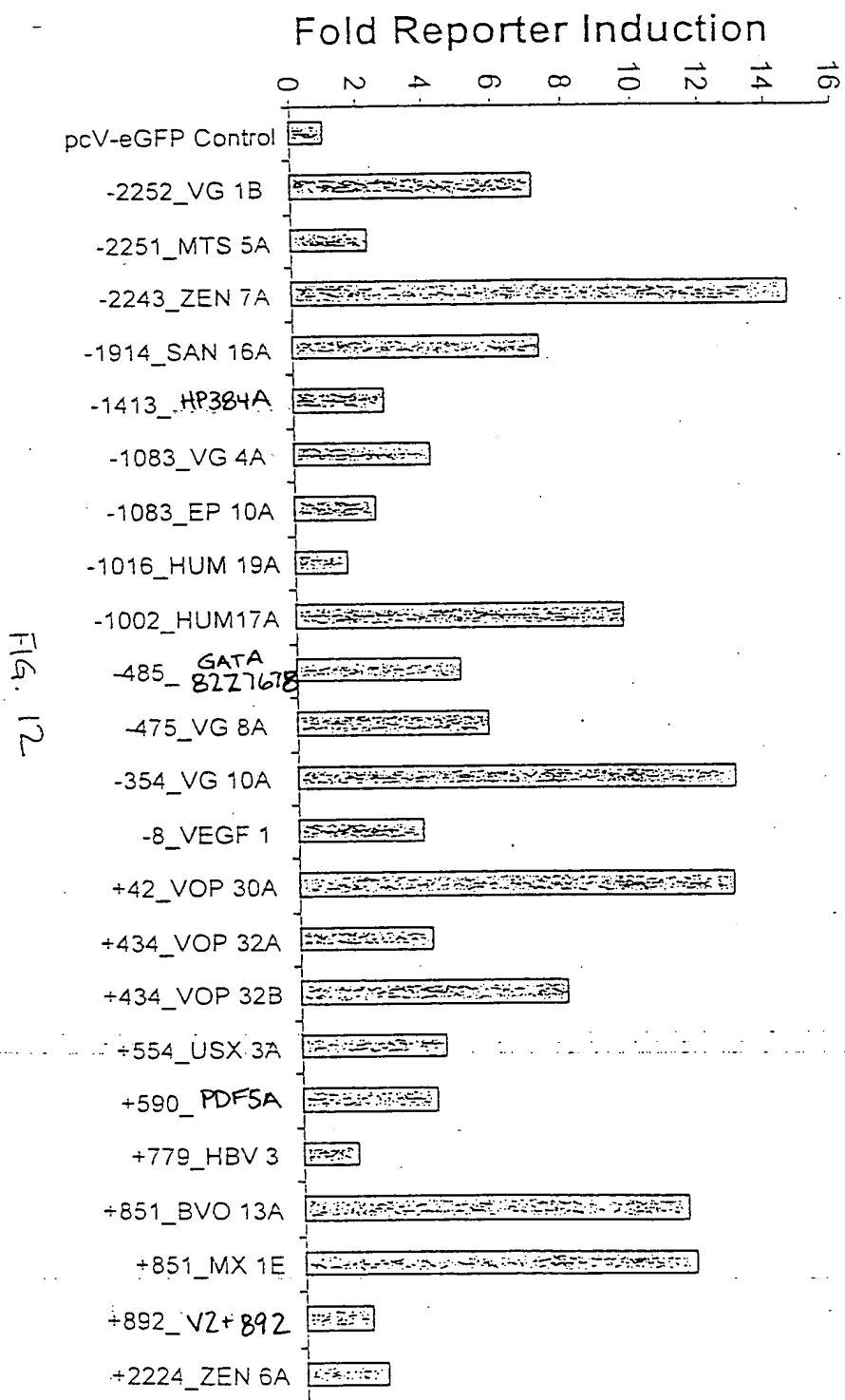


FIG. 11



# Activation of Human VEGF-A Gene Promoter by ZFPs (Activation of VEGF Reporter in 293 cells)



# VEGF Activation By ZFP VOP28A and RAT24A in 293 Cells (VEGF protein detected by ELISA)

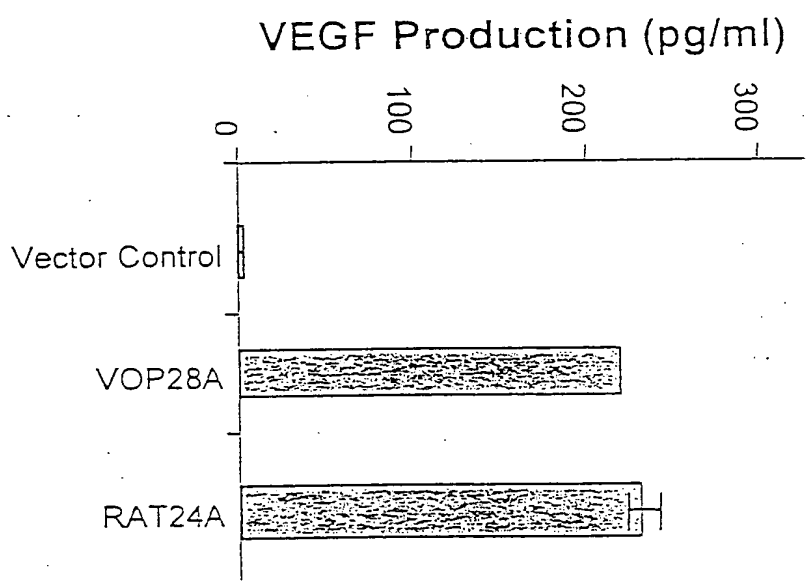
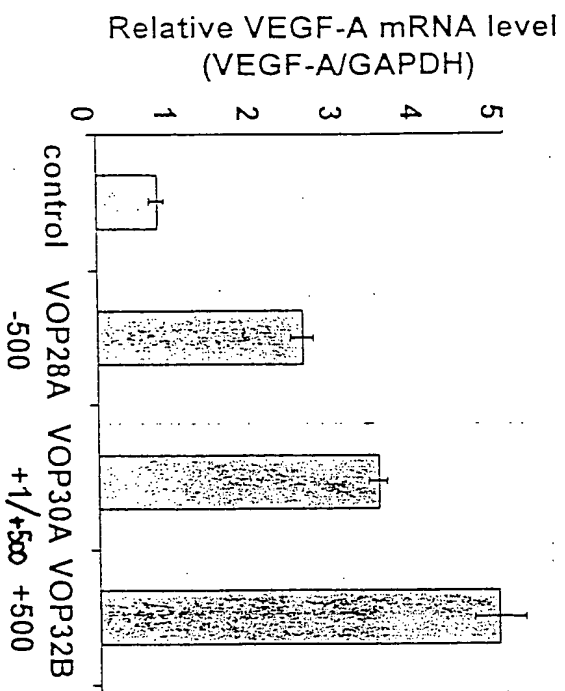


FIG. 13

Figure 14

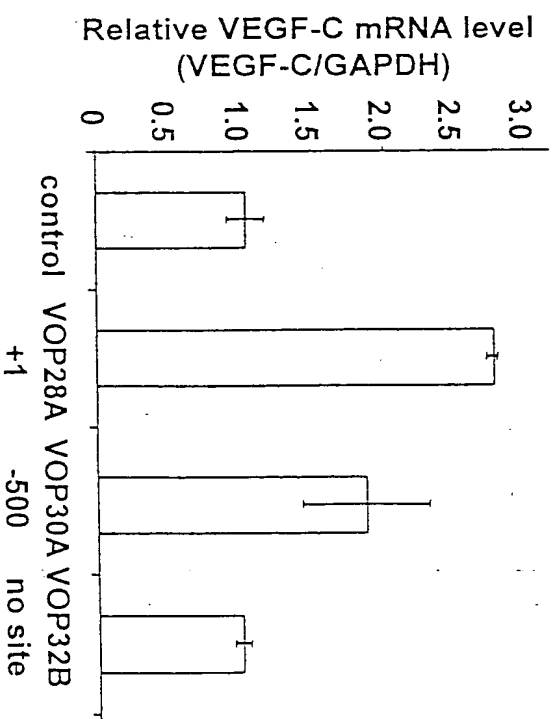
A

VEGF-A mRNA Activation by ZFPs



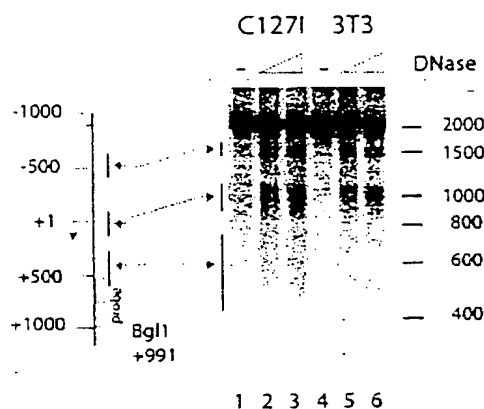
B

VEGF-C mRNA Activation by ZFPs

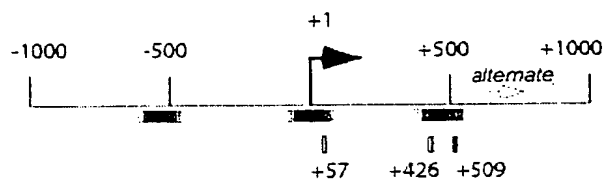


# Figure 15

## A



## B



## C

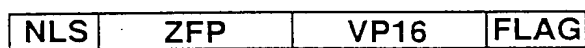
ZFP Name	Target		Finger Designs					
	Sequence 5' - 3'	Subsites 5' - 3'	-1	1	2	3	4	5
mVZ+57	TGAGCGGGCGGCAGCGGAGc	TGA GGG GCG GCA GCG GAG	QSGHLTR	F6	RSDLSR	F5	RSDLTR	F4
			QSGSLTR	F3	RSEDLOR	F2	RSENLAR	F1
mVZ+426	GGGGGTGACc	GGG GGT GAC	RSDHL3R	F3	TSGHLVR	F2	DRSNLTR	F1
mVZ+509	GCTGGGGGCGg	GCT GGG GGC	QSGDLTR	F3	RSDHLTR	F2	DRSHLTR	F1

## D

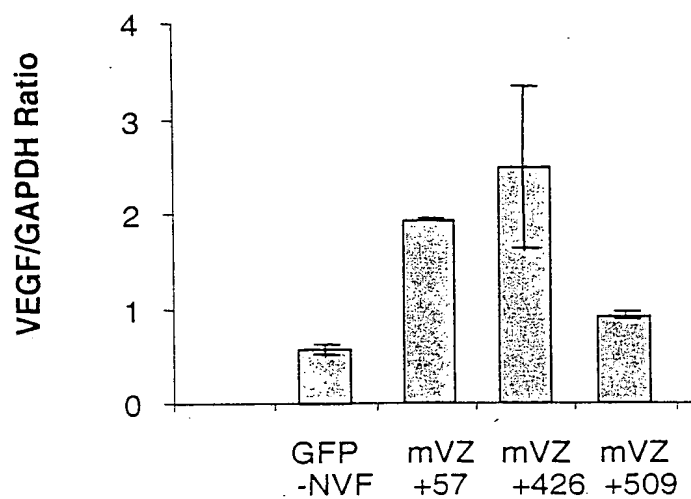
ZFP	Target	Gel Shift		Apparent Kd (nM)
mVZ+57	TGAGCGGGCGGCAGCGGAGc		Bound Free	0.031
mVZ+426	GGGGGTGACc		Bound Free	<0.01
mVZ+509	GCTGGGGGCGg		Bound Free	<0.01
SP1	GGGGCGGGGg		Bound Free	0.053

Figure 16

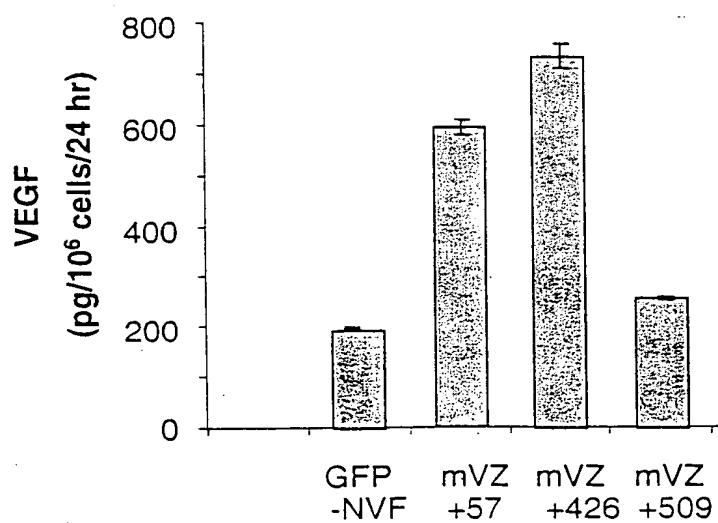
**A**



**B**



**C**



Smooth Muscle Cells Infected With  
Adenovirus Expressing VPO 30A

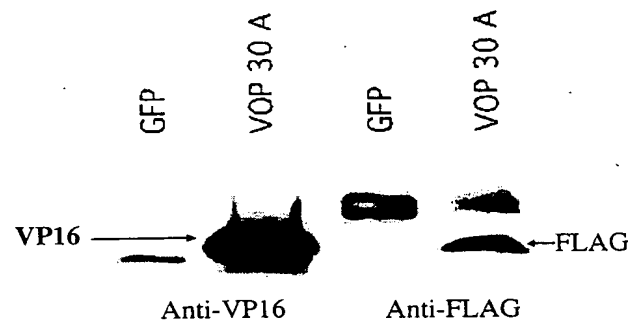


FIG. 17A

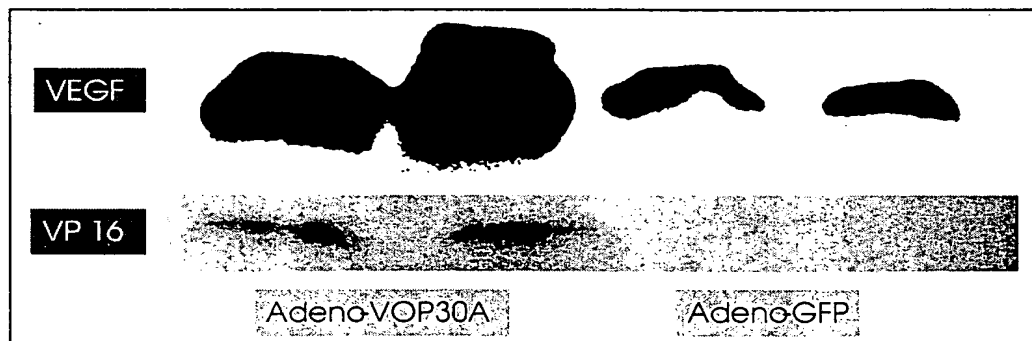


FIG. 17B

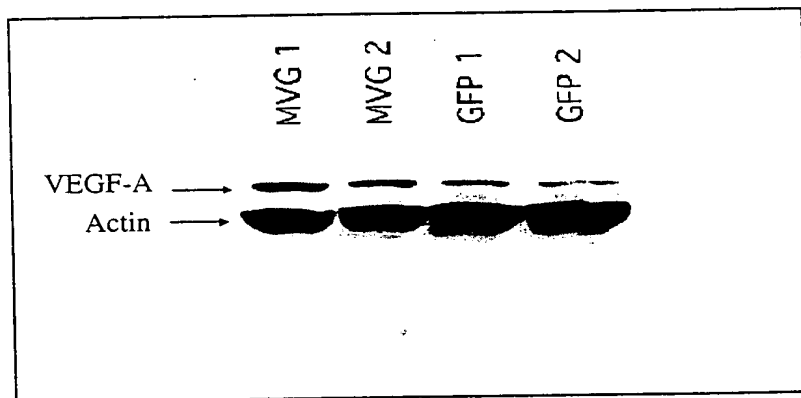


FIG. 17C

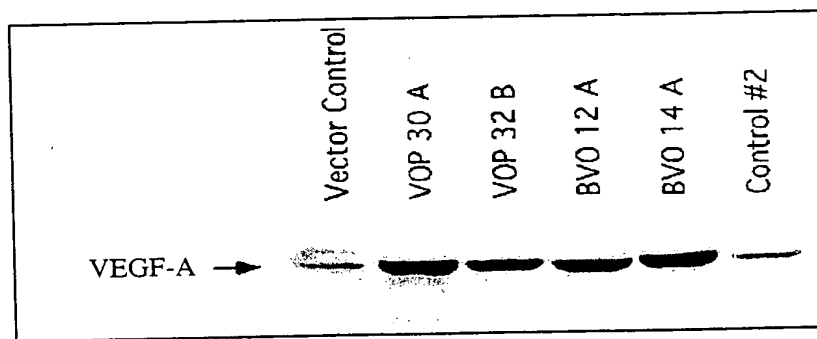


FIG. 17D

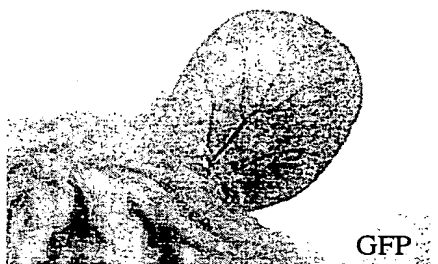
A



B



C



D

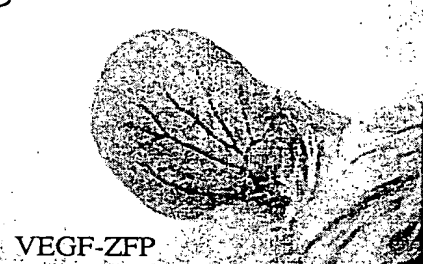


FIG. 18

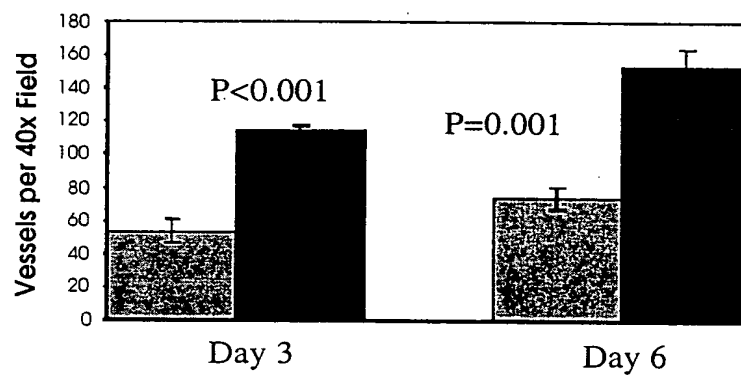


FIG. 18 E



FIG. 19A

GFP



FIG. 19B

MVG

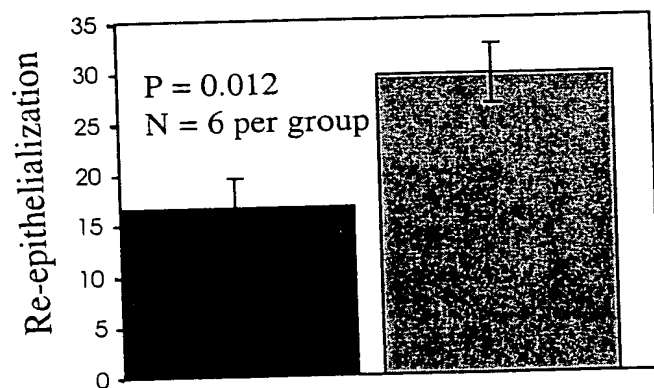
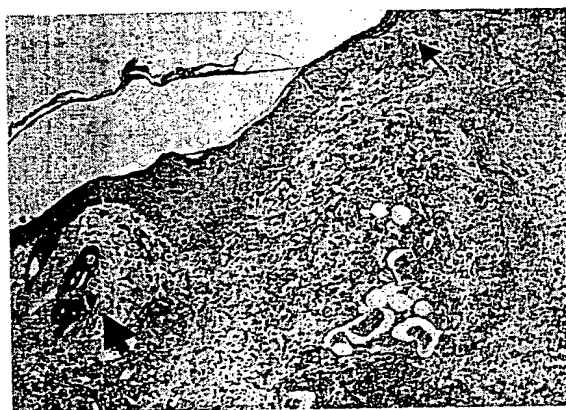


FIG. 19C



VEGF-ZFP (MVG)  
(MVG)

FIG. 20A



GFP Control

FIG. 20B



FIG. 21 A



FIG. 21 B

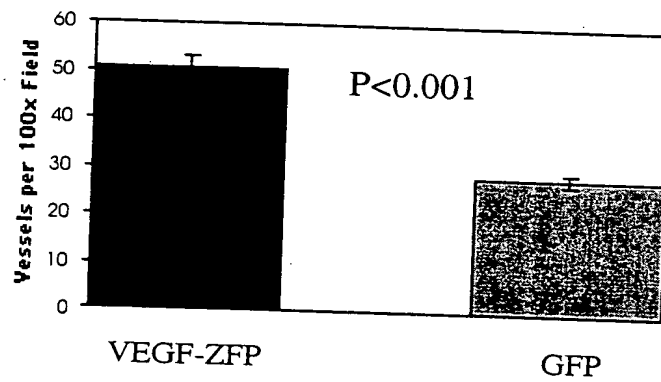


FIG. 21 C